INSTALLATION & SERVICE MANUAL

Reverse Osmosis + DI Water Systems

Model:

6-Stage RO+DI system, 100GPD, dual output +tank+faucet

Made in U.S.A.

www.purenex.com

PRODUCT SPECIFICATION

6- Stage Reverse Osmosis + DI Water Purification Systems
Model no: RD-100 and RD-106
Capacity: Generates 50 to 100 gallons per day depends on water temperature, pressure, chemistry variations)

System includes
- RO+DI unit: 6-stage unit, all filters included.
- Storage Tank (for RD-106 only): 4 gal. pressurized tank with pre-charge pressure of 7~10 psi., powder coated steel construction with Food Grade butyl water bladder. NSF listed
- Water Dispensing Faucet (for RD-106 only): lead-free, long reach goose neck type, chrome steel, locking lever for continuous dispensing.
- Hardware: feed water adapter, feed water valve, drain saddle valve, tank valve, and screws.
- Installation & Service manual

System Requirements
- Working pressure: 40 to 120 psi feed water pressure required, if below 40 psi, a booster pump is needed. We have a RO system with built-in booster pump assembly.
- Working temperature: 100 ~ 40 deg. F (37 ~ 4 deg. C)
- pH range: 2-11
- If feed water has hardness level above 300 ppm, we recommend putting a water softener prior to the RO system.
- If feed water has iron, rust problem, we recommend putting a iron filter prior to the RO system.
- If feed water has bacteria problem, we recommend putting an ultra violet sterilizing system prior to RO system.

Filter Service Life
- 1st Stage Sediment filter: Recommend changing every 6 ~12 months.
- 2nd Stage carbon filter: Recommend changing every 6 ~12 months.
- 3rd Stage carbon filter: Recommend changing every 6 ~12 months.
- 4th Stage HTFC membrane: Recommend changing every 2~3 years.
- 5th Stage Inline carbon filter: Recommend changing every 6 ~12 months.

The filters & membrane used are all standard sizes.

Dimension
- RO unit: Length 15 inch, Width 5 ½ inch, Height 16 inch
- Storage tank: Diameter 10 ¾ inch, Height 15 ¼ inch (for RD-106 only)
- Faucet: 9 ½ inch above counter top (for RD-106 only)

Warranty
- 1 years Limited Warranty on parts, components. Filters are not under warranty.

Performance
- Rejection rate: 92 to 98% of dissolved solids after RO, 98% to 100% rejection rate after RO+DI

Purification Processes/ Filter specifications
Removes microbiological contaminants like Cysts (protozoan), inorganic/Radiological contaminants like Barium, Cadmium, Copper, Chromium (hexvavalent), Chromim (trivalent), Fluoride, Lead, Radium 226/228, Selenium, etc. Ammonia, Arsenic, chloramines, chlorine, copper, lead, nitrate, phosphate, silica, hardness, calcium, magnesium, other dissolved solids.

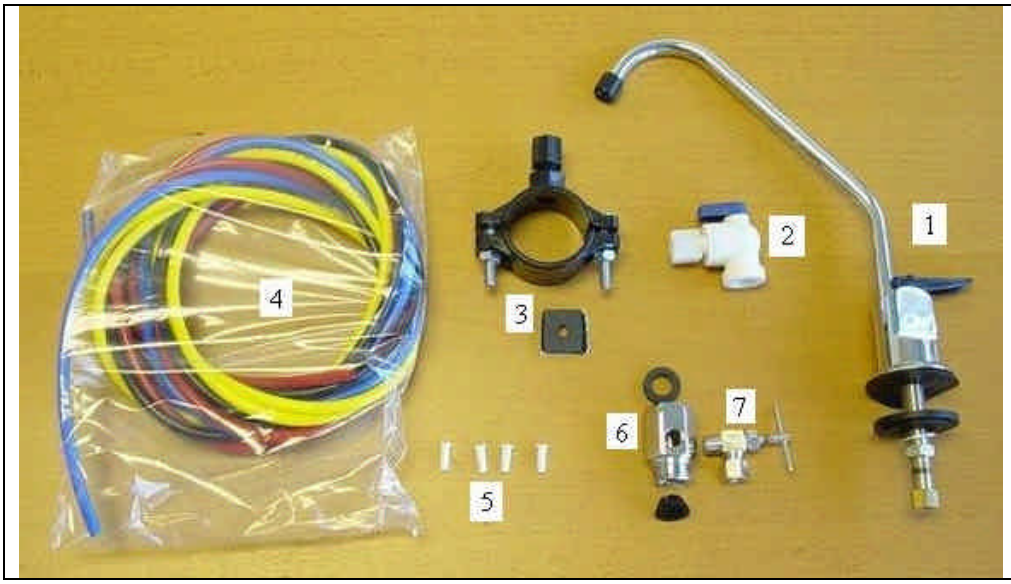
- 1st stage: 5 micron sediment filter, 2 3/8". x 9 7/8" height, made by 100% pure polypropylene fibers
- 2nd & 3rd stage: carbon filter, 2 3/4" x 9 ¾" height, composed of high-performance activated carbon.
- 4th stage: TFC type membrane, 100 GPD, 1 ¾" x 11 ¾" long
- 5th stage: DI filter, deionization filter, further removing dissolved solids.
- 6th stage: Inline carbon filter (polishing filter, improves taste): 2" x 10"

Thank you for choosing Watergeneral Reverse Osmosis Water Systems. You now own a superb Reverse Osmosis (RO) + Deionization (DI) system that effectively reducing most contaminants, organic and inorganic compound, unwanted taste and odor from tap water. It is designed to transform your tap water into distill water.

Read carefully and follow the instruction in this manual before proceeding with actual installation. Failure to do so could result in personal injury or damage to the equipment or other property. Be sure to follow any special plumbing codes in your area.

CHECK LIST:

1. Reverse Osmosis+DI Unit
2. for (RD-106) which includes water storage tank, 4 gallon outside volume (holds 3.2 gallon @60psi)
3. Installation kit consists tank ball valve, drain saddle valve, feed water adapter, feed water needle valve, faucet assembly(for RD-106) , tubing, tube inserts
4. Installation manual



INSTALLATION KIT:

1. Chrome dispensing faucet (for RD-106 only)
2. Tank ball valve
3. Drain saddle clamp
4. ¼" tubing
5. tube insert
6. ½" feed water adapter
7. needle valve or ball valve

RECOMMENDED TOOLS LIST

- Variable speed drill
- 1/8" ¼", 7/16", and ½" drill bit
- 5/8, 9/16 open-end wrench, or adjustable wrench, pliers
- Phillips screwdriver
- Utility knife, or scissor
- Teflon tape

OPERATING PARAMETER

- Working pressure: 40 to 120 psi feed water pressure required, if below 40 psi, a booster pump is needed. We have a RO system with built-in booster pump assembly.
- Working temperature: 100 ~ 40 deg. F (37 ~ 4 deg. C)
- If feed water has hardness level above 300 ppm, we recommend putting a water softener prior to the RO system.
- If feed water has iron, rust problem, we recommend putting an iron filter prior to the RO system.
- If feed water has bacteria problem, we recommend putting an ultra violet sterilizing system prior to RO system.

WARNING: Do not use this RO+DI system alone to treat water with bacteria problem or water source with unknown quality.

WARNING: Do not connect HOT water source to this unit.

WARNING: Incorrect installation will VOID the warranty.

ASSEMBLY QUICK VIEW (RD-106, follow the photo below, for RD-100 filters are already installed)

Carbon Carbon Sediment

1. Remove plastic wrap on the filters (for RD-106)
2. Insert the filters as shown above.

1. Put upper portion of the unit on top of the filter housing
2. Screw on the filter housing **vertically** to the filter housing cap by hand
3. Then use filter housing wrench to tighten the each housing

3 ways to connect to water supply: (1) Connect to faucet, (2) Connect to garden hose or laundry room hose, (3) Install under the sink and connect to cold water supply

Connect to faucet: You can use the diverter valve to connect to the aerator part of your faucet.

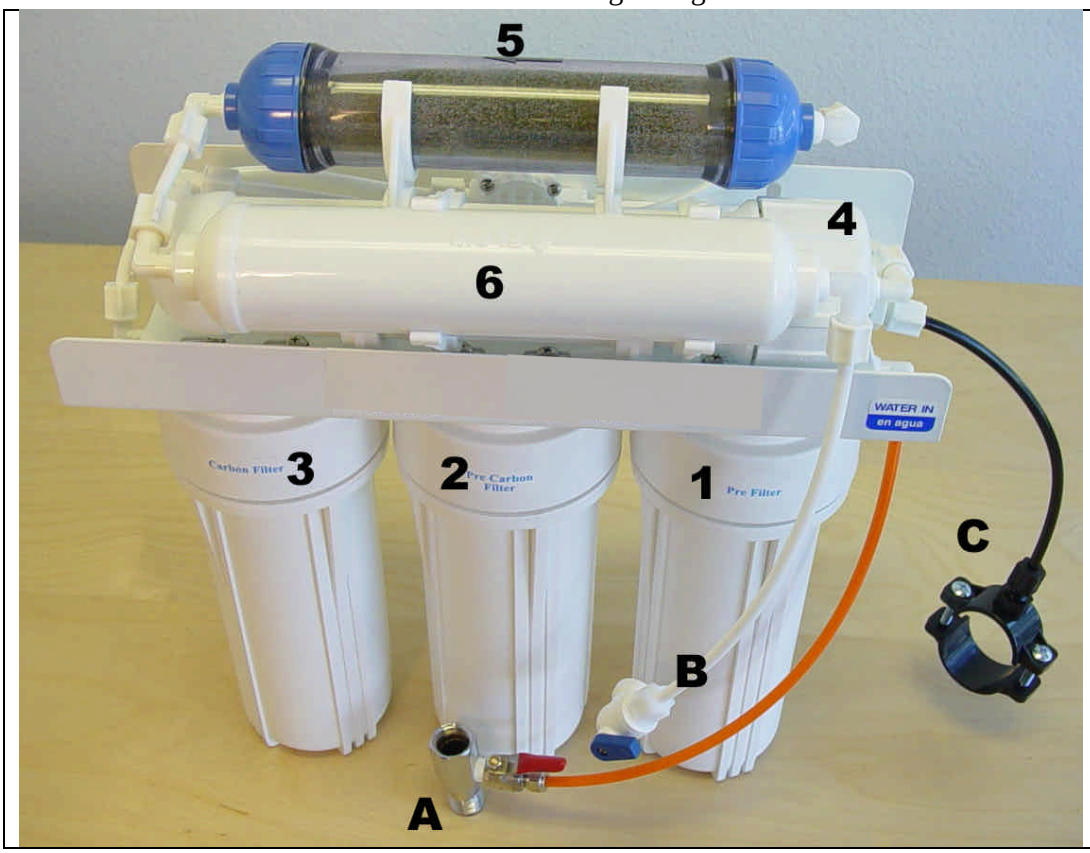
1. Unscrew the tip or the aerator part of your faucet.
2. Connect tubing to the barb connection of the diverter valve by pushing in the tubing
3. Make sure the diverter valve threaded portion has a small O-ring in place.
4. Screw on the diverter valve to the faucet tip. Use pliers if necessary.
5. Connect the other end of the tubing to the RO+DI system
6. Turn on your kitchen faucet all the way up, cold water. The water should come out of the valve like regular faucet water. Then turn the lever 90 degree to divert water to the RO+DI system.
7. Then follow the picture below for the other tubing connection. You can put the drain line to the sink. It is not required to plumb the drain, just let it flow to the sink.
8. NOTE: The size provided is the most common size. If your faucet does not fit, you can buy converter at local hardware store or choose other methods of connecting it.

Connect to garden hose or laundry room hose

1. You can connect the ¾" garden hose adapter directly to the hose valve or to hose.
2. Just screw on the adapter directly to the hose or hose valve. Use pliers if necessary.
3. The other end of the adapter is a Quick-connect fitting ¼". So just push in the ¼" tubing about ½" into the fitting, then it will seal itself.
4. Then for other tubing connection, please refer to the picture shown next page. The drain line can just run to open drain or to the laundry room drain.
5. You can also use a hose Y-connector to connect to the hose valve to have two outlets, so one for the system and one for your laundry room washer.

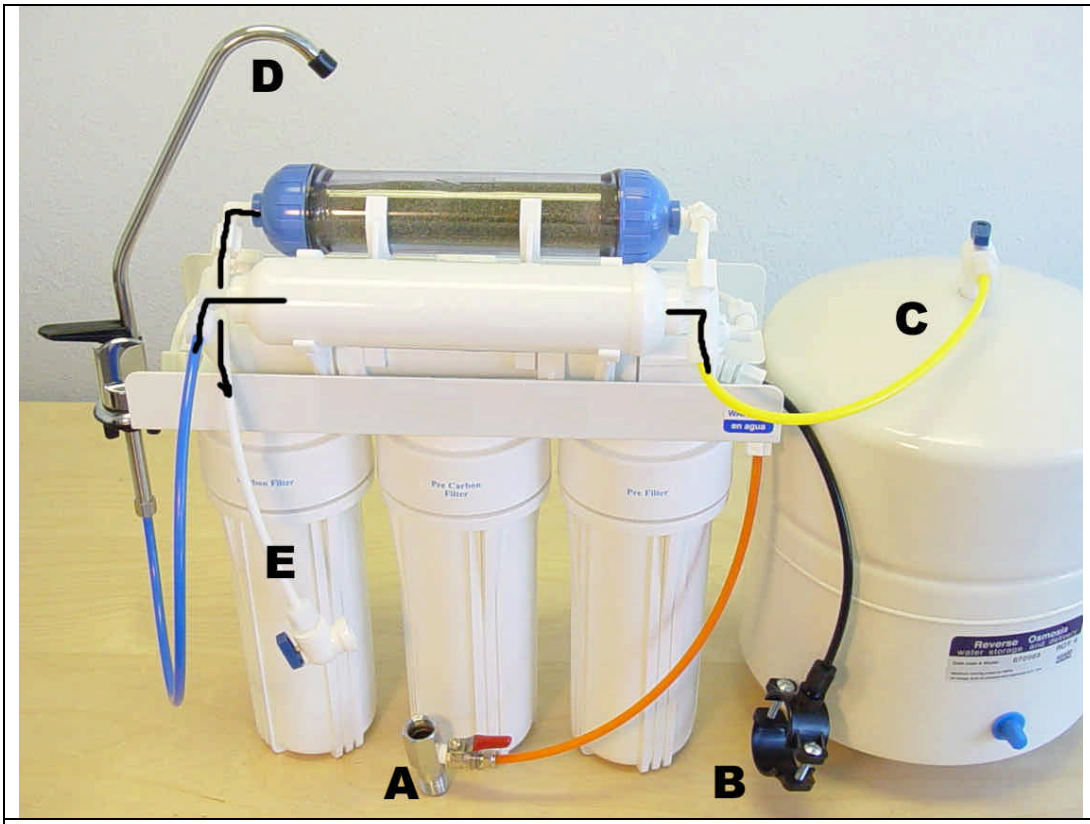
INSTALLATION QUICK VIEW

- Please follow the color code for connecting tubing to the unit.



	4 connections	Color tubing
A	Feed water valve	Orange or Red
B	DI water dispensing valve	Blue
C	Drain saddle valve	Black

Model: RD-100



	4 connections	Color of tubing
A	Feed water valve	Orange or Red
B	Drain saddle valve	Blue
C	Tank ball valve	Black
D	Dispensing faucet	Yellow
E	DI water valve	white

Model: RD-106

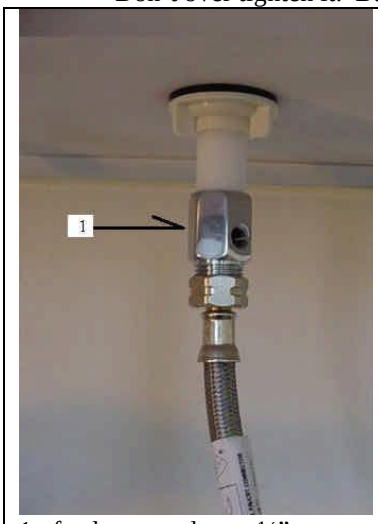
INSTALLATION (for under-the-sink installation)

STEP 1: TAPPING INTO COLD WATER SUPPLY

CAUTION:

- The water supply to your RO unit MUST be from **COLD water line** . Hot water will damage your RO system.

1. Locate cold water shut off valve under the sink and turn it off. Open cold-water faucet to release the pressure, and make sure there is no water.
2. Put 3 turns of Teflon tape on threaded ends of the angle needle valve and feed water adapter.
3. Determine the best location for putting the feed water adapter. Do you have a flexible line or a solid copper tube? Is the flexible line with smooth surface or spiral line? Is there enough space for installing feed water adapter? More radius or more space is required if you first joint the feed water adapter with the needle valve. Is the size of fitting thread the same as the feed water adapter?
4. You can either joint the angle needle valve to the feed water adapter first, or install adapter to cold water supply line first. It depends on how much space is available under the sink.
5. For FLEX line: Loosen nut and separate cold water riser tube from faucet shank. Gently bend riser tube so that feed water adapter fits onto faucet shank. Use the Existing cone washer (if the existing cone water is badly damaged, use the new cone water provided in the kit). NOTE: If you have a spiral type flex tube riser, you NEED to use the existing cone water, since the cone washer we provided is straight, not spiral). Use Teflon tape on threaded parts to prevent leaks. Then tighten the connection.
6. For Solid Copper riser: Same procedure as flex tubing except you must cut a piece of the riser tube about 3/ 4" to 1" so the adapter can fit between faucet and riser tube. Use Teflon tape to prevent leaks.
7. Install the angle needle valve to adapter if you have not done so in procedure #4.
8. For connecting red tubing to angle needle valve, put 2 turns of Teflon tape on treaded end. Then pass through the brass nut, then the sleeve, then put plastic insert inside the tubing, then push sleeve against the insert, then screw on the brass nut. Don't over tighten it. But it has to be tight.

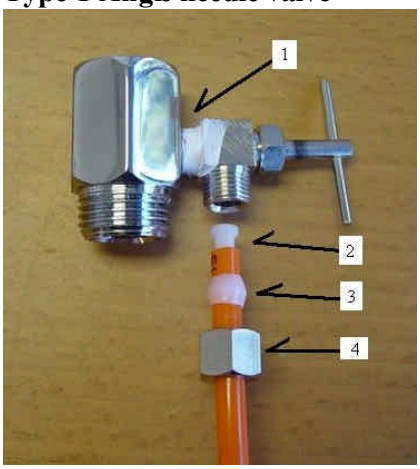


1. feed water adapter ½" connect to base of kitchen faucet

1. buy a ½ pipe to ½" pipe hose
2. ½ to ½" nipple fitting. 3. adapter.
4. your existing faucet pipe

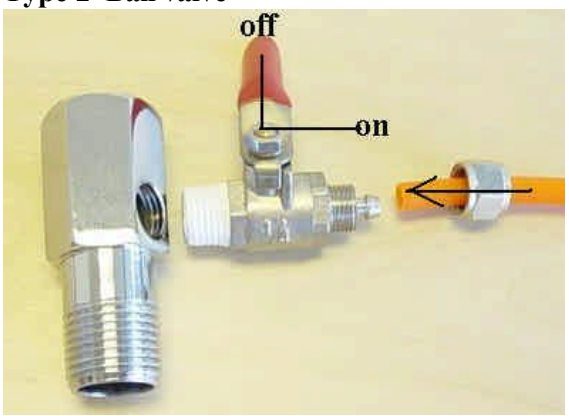
- Many times, it is easier to use the existing cone washer than using the new one.
- If there is not enough space under the sink base, or it's difficult to get to, you can disconnect the riser from the cold-water valve side. If the fitting size does not match, buy size-changing fittings, or buy a new flex riser with matching sizes.
- Many times, it is easier to buy an additional stainless flex riser and a ½" nipple to put in between the bottom of the faucet male thread and the feed water adapter (Don't buy the spiral type) so you can easily put the feed water adapter between two risers. This is the EASIEST way. Spend additional $5 on the riser may save you a lot of time.

Type 1-Angle needle valve



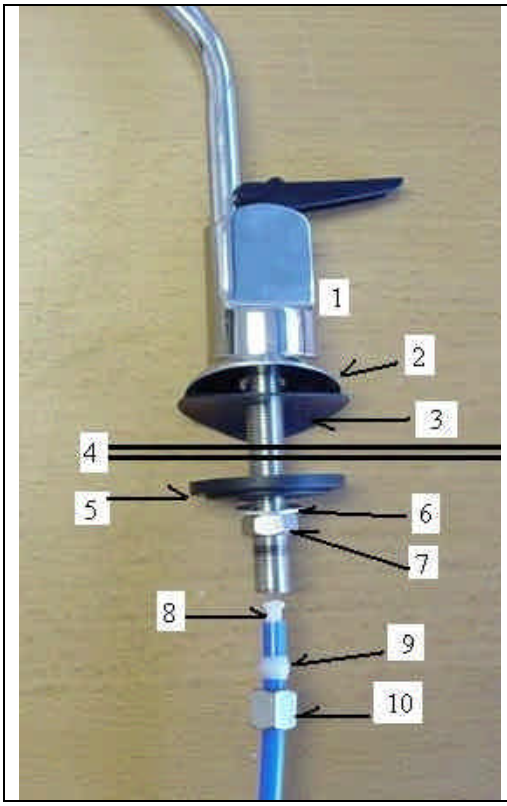
1. put Teflon tape
2. tube insert
3. sleeve.
4. compression nut

Type 2- Ball valve



1. put Teflon tape on the thread, 2. push tubing through the nut, 3. push tubing all the way into the connection, 4. screw on the nut tight using a wrench

STEP 2: INSTALLING THE DISPENSING FAUCET



1. faucet base
2. small washer+ chrome plate
3. large washer
4. kitchen sink
5. bottom plate
6. lock washer
7. lock nut
8. tube insert
9. sleeve
10. faucet nut

drill 1/2" hole on the sink

The faucet should be positioned with aesthetics, function and convenience in mind. An ample flat surface is required for the faucet base so that it can be drawn down tight. Also check the under sink area of the desired location to see if there is ample space to complete the faucet installation.

If the space is not available on the upper sink area, the faucet could be positioned on the counter top at the edge of the sink. Be sure to watch for obstructions below, i.e., drawers, cabinet walls, support braces, etc. If the counter top is ceramic tile, the method for drilling the hole should be the same as for porcelain sink.

NOTE: The sink drilling process, although not complicated, requires a certain amount of caution and forethought. Porcelain sink can chip if care is not exercised.

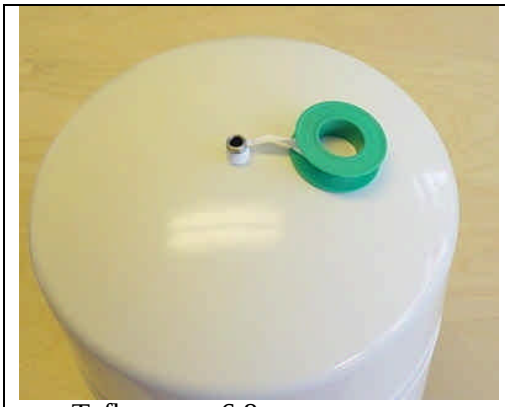
PORCELAIN ENAMEL SINK/ STAINLESS STEEL SINK/ ALUMIUM SINK

A 1/ 2" hole is required for the faucet. It is recommended that you get special drill bit for porcelain and tile counter. If you don't have the special drill bit, then you need to pay special attention.

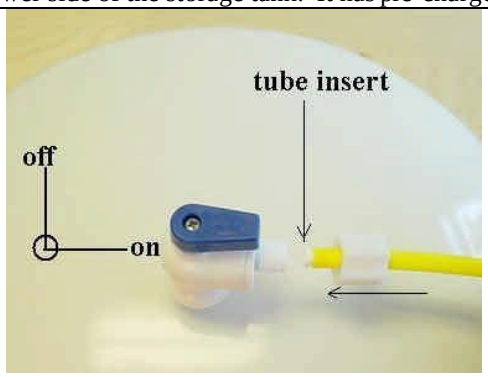
1. Place a piece of masking tape or duct tape on the determined location where the hole is to be drilled.
2. Use a variable speed drill at slow speed with 1/8" drill bit, and drill a centering hole in the center of the desired faucet location. Use lubricating oil to keep the drill bit cool while drilling.
3. Enlarge the hole using a 1/ 4" drill bit.
4. Enlarge the hole using 7/16" or 1/ 2" drill bit. Keep bit well oiled and cool, then drill slowly.
5. File or clean the surrounding area and remove the masking or duct tape. (NOTE: the metal chips on porcelain will stain very fast)
6. DON'T put Teflon tape at the tip of the threaded mounting base of the faucet since it's a compression fitting.
7. Pass the small rubber washer, the escutcheon plate (chrome base plate), large rubber washer according to the diagram through the threaded mounting tube at the base of the faucet
8. From under the sink, install the locating washer, lock water, and nut. Then screw on tightly.
9. According to the diagram, pass brass nut through the BLUE tubing first, then plastic sleeve (preferred), or brass sleeve, then the plastic insert. Push the white plastic sleeve against the insert.
10. Screw on the Blue tubing with brass nut to the faucet base. Uses wrench to tighten the nut but don't over tighten it. Too tight would cause leak.
11. Pull out the 3/8" O.D. spacing tube from RO faucet and insert the spout into the faucet base while holding the black lever handle in horizontal position.
12. The spout is 360-degree swivel. The faucet lever can be pushed down for dispensing or pull up for continuing dispensing.

STEP 3: MOUNTING THE TANK BALL VALVE (for RD-106 only)

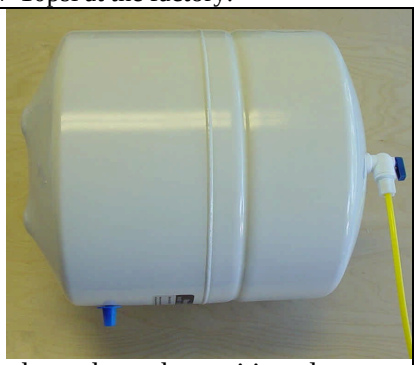
Do not release air from the air valve on the lower side of the storage tank. It has pre-charged at 7-10psi at the factory.



put Teflon tape, 6-8 turns

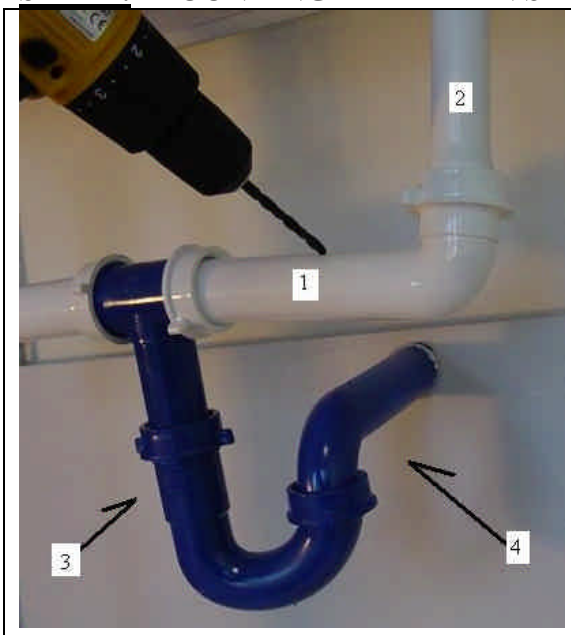


screw on ball valve tight, push tubing through the nut, put tube insert, screw on the nut



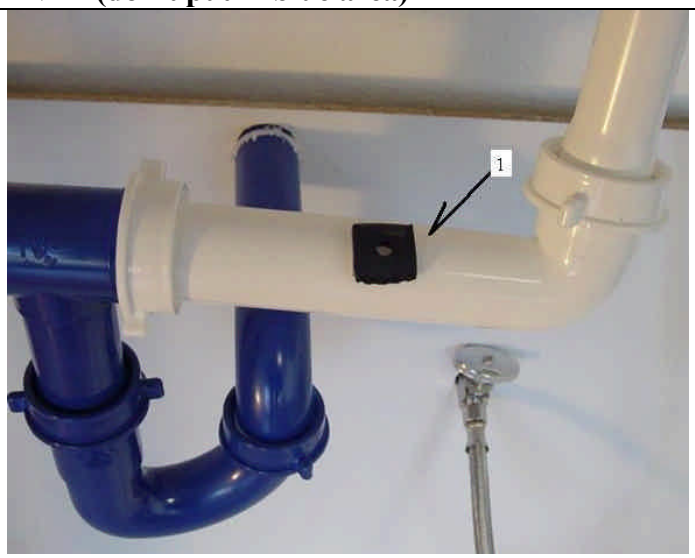
the tank can be positioned laying down or standing upright

STEP 4: MOUNTING THE DRAIN SADDLE VALVE (don't put in blue area)



The drain saddle valve should fit most standard drainpipe. It should be installed above the trap and on the horizontal pipe (1) or vertical pipe (2).

DON'T put on position (3), (4), or blue section

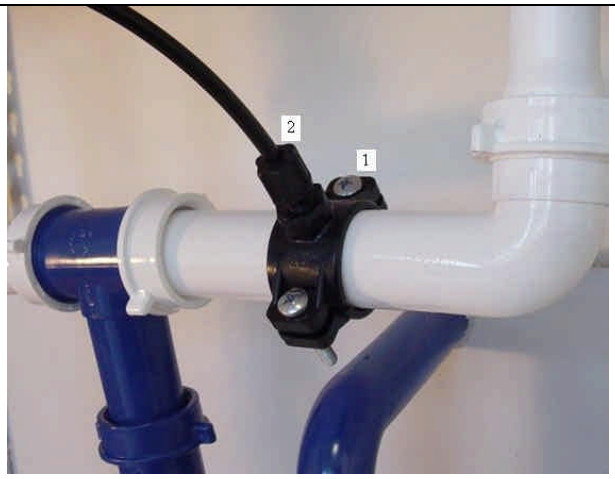


Position the drain saddle in desired location, mark spot. You need to consider available space for drain tubing

Drill 1/ 4" hole into the drainpipe above the water line of the pipe. Clean the surface of the pipe.

Pears off the sticky foam pad, then aligns the center hole around the drilled pipe hole. Then tape it.

Align the drilled hole in the drain pipe with the drain saddle using a drill bit or narrow screwdriver



put the complementary piece and clamp them together with the two bolts. (1) Tighten the two bolts evenly. (2) Connect Black tubing to drain saddle valve.

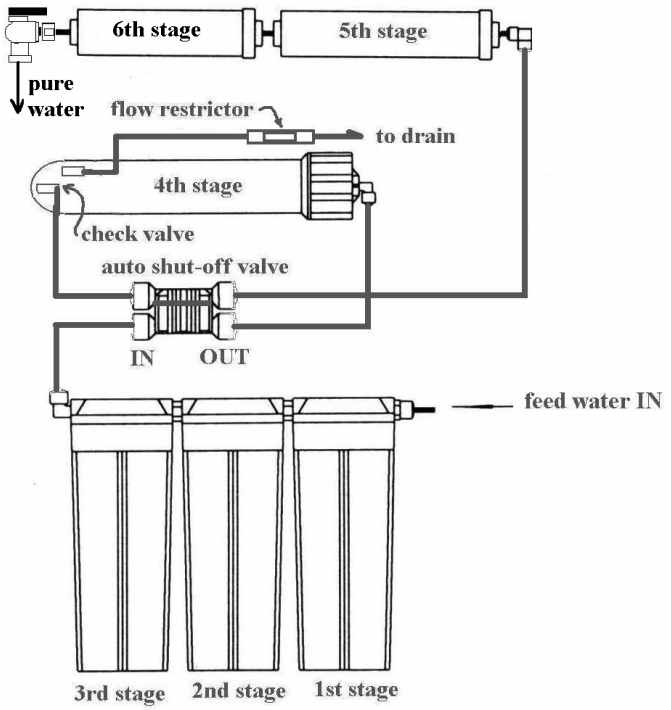
STEP 5: SYSTEM START-UP

1. Make sure all tubing are not kinked.
2. Turn Tank Valve to OFF position, Faucet lever OFF. (for RD106 only)
3. Turn RO faucet lever to continuous flow position. Lever points up. (for RD-106 only)
4. Turn cold water supply main valve on slowly. Also turn input ball valve ON. When the system is pressurized, check for leaks. If leak is found, tighten the connection.
5. Wait 5 minutes, the water should start dripping out of the RO faucet, and then wait 10 more minutes to allow water to flow through the system, and air trap inside the system can be released.
6. Turn Tank Valve to ON position, lever is parallel to the tubing. (for RD-106 only)
7. Turn the RO faucet lever to OFF. Now the purified water will start going into the storage tank. (for RD-106)
8. Wait 3 hours for the storage tank to be filled up.
9. DO NOT DRINK THE FIRST BATCH OF WATER PRODUCED BY THE SYSTEM. For RD-100 let pure water drain out for about 1 gallon
10. After storage tank is full, turn the RO faucet lever to continuous flow position, (Lever points up) to discharge the first batch of water. Wait until it's completely discharged. (for RD-106 only)
11. After discharging the tank, turn the RO faucet to OFF position. Now the RO system is refilling the tank.
12. After the tank is filled up again, you can start enjoy the pure water. Job Well Done!

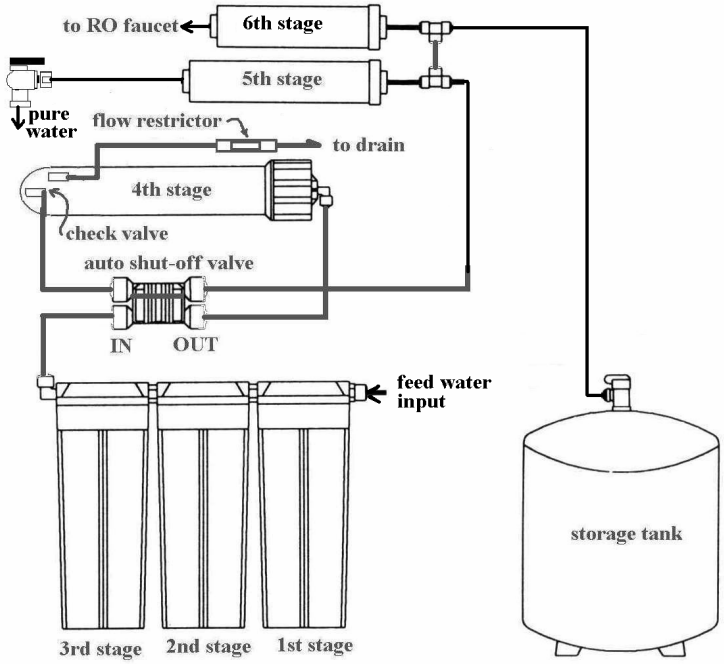
NOTE: Check for leaks daily for the first week after installation.

Flow Diagram for 6-Stage Reverse Osmosis+ DI Water Systems

MODEL: RD-100



MODEL: RD-106



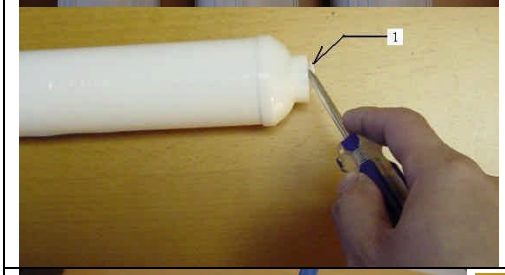
SERVICE RECORD:

DATE OF PURCHASE:_____

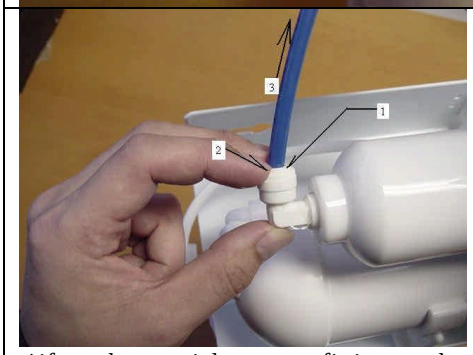
DATE OF INSTALLATION/SERVICE:_____

Service Date	Date	Date	Date	Date
1st stage sediment				
2nd stage carbon				
3rd stage carbon				
4th stage membrane				
5th stage DI filter				
6th stage inline carbon				

Changing Filters Procedures

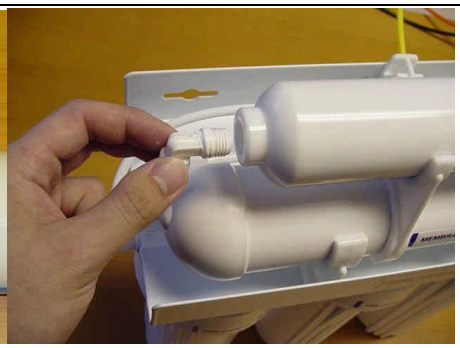


- Shut off the system by turning off the water supply, and turn off the tank valve, open the spigot to depressurize
- Prepare a towel under the unit for water spills
- Use a filter wrench (part no. 566, not supplied with the unit) or use hands to open the filter housing, unscrew it from right to left.
- Throw away the used filter, and clean the inside of the housing by rinsing or scrubbing it.
- Checking the black "O" ring inside the filter housing (DON'T LOOSE IT)
- Place the new filter inside the filter housing. For 204 & 904 carbon filter, the end with rubber gasket should be on top.
- Place the "O" ring in the housing groove (MAKE SURE IT IS IN PLACE)
- Put some Vaseline or silicon-based lubricant on the side of the housing thread (optional procedure)
- Use a filter wrench or both hands to screw the housing back into place by turning it from left to right (Don't lay down the unit when turning it, the unit should be standing upright to prevent the o-ring from misalignment)
- Repeat the above steps for other filters
- **<u>The new style 5th stage inline carbon filter</u>** has penny-sized protective caps on both ends. Please use a screw driver or knife to pry open the caps.



*if you have quick connect fitting, push plastic ring against fitting, pull out tubing

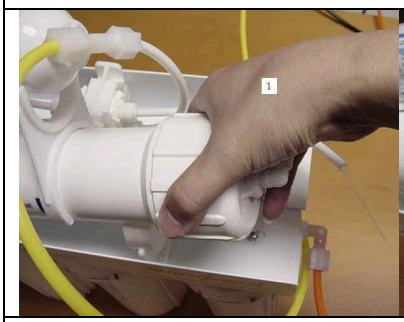
* if you have compression fitting unscrew to remove tubing

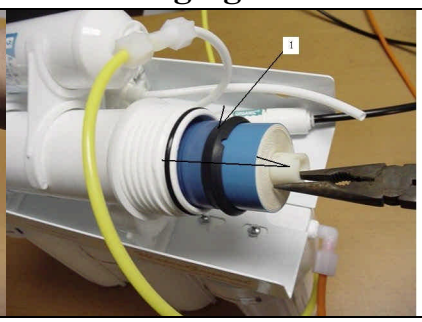


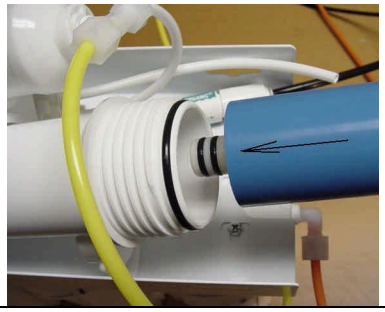
*unscrew fitting off to replace filter

For part no. 213 or 913 inline carbon filter, remove fittings from both ends of the filter then replace new filter.
After all housings are tight, turn on the water supply and tank valve.
Check for leaks, if there is a leak, tighten the housing or re-aligning the o-ring.
Open the spigot to drain all the water out of the storage tank.
If you are changing a carbon filter or membrane, you must drain the first tank of water after restart the system.
Refer to the back of this page for recharging tank procedure (if necessary)

Changing Membrane Procedure







- Free the membrane housing from the U-clips, and remove the tubing from the membrane fitting (the inlet side of the membrane housing, or the side with the membrane housing cap). Unscrew the membrane housing cap off (counter-clockwise)
- Use a pier to pull the membrane out of the membrane housing, and dis card the used membrane.
- Put some Vaseline or lubricant on the small black O-rings. Insert the new membrane into the membrane housing (THE SIDE WITH DOUBLE BLACK O-RINGS SHOULD GO IN FIRST) Push the membrane all the way in (some force is required to make sure the membrane is all the way in). Put some Vaseline or silicon based lubricant to the side of the housing threads.
- Screw the membrane-housing cap back (clockwise). Make sure O-ring is in place. Connect the tubing to its elbow fittings.
- Turn on the water supply and tank valve to restart the system. Check for leaks, if there is a leak, tighten the cap
- Wait 2 to 3 hours for the tank to be filled then you must drain the first tank of water by opening up the spigot to flush the system.

TROUBLE SHOOTING

NOTE: Turn off the system before servicing.

Installation Troubleshooting		
PROBLEM	POSSIBLE CAUSE	SOLUTION
No or low water production	1. Feed water valve in not turn on 2. Tank valve is not turn on 3. Tubing is kinked	1. Turn on feed water valve 2. Turn on tank valve 3. Straighten the tubing
Leak at filter housing	1. Housing is not tighten 2. Damaged or misaligned O-ring 3. Housing has cracks	1. Tighten housing 2. Re-aligned O-ring or replace 3. Replace housing
Leak at fitting thread	1. Not properly tighten 2. Fitting has cracks	1. Use Teflon tape, re-tighten 2. Replaced it
Bad-tasting water	1. Not yet flush the system 2. Tubing connection incorrect	1. Discharge water from tank 2. Check flow diagram
Milky/Cloudy water	1. Air in system/filters	1. This is normal, continue use it for 2 weeks
Noise from drain	1. Saddle valve mounted too high	1. Lower the saddle valve When system is making water, waste water to drain is normal, when storage tank is full, drain should stop

Troubleshooting		
PROBLEM	POSSIBLE CAUSE	SOLUTION
When turn on the RO faucet, only small amount of water come out.	1. Lifting the tank to see if there is still water inside. Heavy or light ?	1. If it's heavy, you need to recharge tank, following recharge procedure 1b. If its light, the water either is not going in or the system is not making water.
Vibrating noise or very loud high pitch noise	1. From the auto shut-off valve	1. If the noise is too unbearable, shut-off valve should be replaced.
Drain water never shut off	1. Auto shut-off valve is worn out or becoming ineffective 2. Storage tank not enough pressure 3. Water supply pressure is near 40 psi or below 4. Cold water temperature 5. Filters are clogged up	1. Replace auto shut-off valve 2. Follow recharging tank procedure 3. Increase feed water pressure 4. Can't do anything about it. 5. Replace filters
Low water production	1. Storage tank problem 2. Clogged filters 3. Kinked tubing 4. Clog flow restrictor	1. Follow recharging tank procedure 2. Replace filters 3. Straighten the tubing 4. Replace flow restrictor

Note: Clogged filters: How do you know if the filters are clogged up? For the pre-filters, sediment filters and carbon filters; check the pressure difference before and after the filters. If there is significant difference in pressure that means the filter is clogged. Turn OFF tank valve and cold water main valve then open the RO faucet to depressurize the system, then disconnect the tubing after the bottom three pre-filters, then turn ON the cold water main valve. If you get very strong water pressure, (as strong as water going into the system) then the bottom 3 pre-filters are not clogged. If the water pressure is much smaller, unlike a burst of water pressure, then the bottom 3 pre-filters need to be replaced. **Note**: Checking a clogged membrane uses different method. Use a water quality meter TDS meter to check the condition and performance of the RO membrane (4^{th} stage filter)

Note: Clogged flow restrictor: When you disconnect the black tubing going into the saddle valve, and the RO system is in the processing of making water (by turning on the RO faucet), there should be a small steady flow of drain water. If you do not get any drain water, the flow restrictor may be clogged, then you need to replace a new flow restrictor ASAP, and discontinue using the system.

RECHARGING TANK PROCEDURE

PROBLEMS:

- When you turn on the spigot you get small water pressure and water flow.
- When you turn on the spigot, only a quick burst of water comes out of the system, then it dies down to trickles.
- When you turn on the spigot in the morning, you only can get less than a gallon of water.

If you have above problems, you should recharge the tank. The tank should have about 7 psi of air pressure when it is completely empty. The storage tank has a water bladder inside, and it is surrounded by compressed air, so when you turn on the spigot, the compressed air would squeeze or compress the water bladder to force the water out of the tank. When the tank is full the tank pressure can reach about 35 to 50 psi depending on your feed water pressure, but to accurately recharge the storage tank, you should empty the tank then set the air pressure to 7 psi.

TOOLS NEEDED: An air compressor or air pump (like a bicycle tire air pump. An air pressure gauge that is able to read less than 10 psi. Adjustable wrench or 9/11" wrench

STEPS:

1. Shut off the water supply to the RO system. Turn on the spigot to allow water to run until it stops (you can collect the water if you want)
2. Check to see if there is still water in the storage tank by lifting the tank. If the tank feels heavy, that means you need to recharge to tank, then continue the following steps. If the tank feels light, that means you don't need to recharge your storage tank at this time.
3. Locate the air valve on the side or on the bottom of the tank. It looks like the air valve on tires.
4. Use an air compressor or air pump to pump air into the tank. Keep the spigot on while pumping air, so that all water inside the tank can be purged out. Don't over charged it, just keep around 20 psi.
5. After all water is been discharged, use an air pressure gauge to check the tank pressure.
6. The tank should have 7 psi of pressure when it's empty. Add or purge air if necessary.
7. Turn the feed water valve back on, and turn off the spigot to allow refilling of the tank. It may take couple hours to refill the storage tank.
8. Finished

NOTE: If after few days of running the system, the problem comes back, then you may need to replace a new tank.

LIMITED ONE-YEAR WARRANTY

1. **What your warranty covers:**
   WaterGeneral Reverse Osmosis+DI Systems are warranted to the original owner to be free of defects in material and workmanship from the date of manufacture for two years as follows:
   a. Manufacturer will, within one year of purchase, replace the defected parts (excluding filters) at no charge.
   b. The replaceable filters are not warranted since the service life of replaceable filter varies with local water conditions and thus not warranted.
2. **Conditions of Warranty:**
   a. System must be maintained and serviced with the manufacturer original replacement parts and filters. The performance of your drinking water system is directly related to the conditions of the water been treated and the particular application in which it is used. Therefore, manufacturer's liability is limited to the cost of repair of the RO+DI system. **The manufacturer is not liable for incidental or consequential damages of any kind.** Systems must be installed and operated in accordance with manufacture's recommended procedures and guidelines.
3. **What WaterGeneral Reverse Osmosis+DI Systems will not do:**
   a. Warranty is void if product failure or damage results from freezing, neglect, misapplication, fouling with sediment or scale or failure to operate the system in accordance with the instructions contained in this manual.
   b. The following operating conditions must also be followed for this warranty to be valid
      - The hardness of the water cannot exceed 7 grains per gallon or 120 ppm.
      - No iron can be present in feed water. Or iron should be removed from feed water.
      - The pH of the water must not be lower than 3 or higher than 11
      - Feed water Total Dissolved solids TDS should not exceed 1000 ppm
      - Feed water temperature between 90 F and 45 F or (32C and 5 C)
4. **Limitations and exclusions:**
   Manufacturer will not be responsible for any implied warranties, including those of merchantability and fitness for a particular purpose. Manufacturer assumes no liability whatsoever for any incidental and consequential damages, including loss of revenue, loss of time, travel expenses, inconvenience, and any damage caused by the equipment and its failure to function properly.